State of New Jersey

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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May 13, 2013

Patricia Simmons-Pierre
Remedial Project Manager
USEPA Region 2
290 Broadway, 20th Floor
New York, NY 10007-1866

Re: L. E. Carpenter (LE)
Wharton, Morris County, New Jersey
SRP PI# 003017

Dear Ms. Simmons-Pierre:

The New Jersey Department of Environmental Protection (Department) has completed a review of the Wetland Area Well Point Work Plan dated April 8, 2013, as well as the Site Progress Report dated April 10, 2013, submitted pursuant to CERCLA and the Technical Requirements for Site Remediation at N.J.A.C. 7:26E (Tech Rules).

The Department's comments on these submittals are provided below.

Subsequent to the excavation, source removal, and ground water remedial activities on the main portion of the site (Source Removal Area), an additional investigation revealed the presence of high concentrations of site related contaminants of concern (COCs) and product in the adjacent wetlands, just to the east of the remediated area. High levels of site related contaminants, suggestive of free phase product, were documented in several wells; and MW-32S documents free phase product, as measured by interface probe. Additionally, booms, between surface water sampling locations SW-R3 and SW-R2, were installed to prevent product discharge to the Rockaway River.

The report proposes the installation of four direct push temporary well points in the wetlands, centered around MW-35s. This is acceptable, however the Department requires additional well points on a line extending from MW-35s to SB-2. Previous ground water flow patterns suggest possible contaminant transport through this area from the former remediated source area to the ditch.

The Department requires that LE install and sample at least one well point adjacent to a contaminated well, such as MW-35s, to compare results. MW-35s must be concurrently sampled.

At least one well point must be profiled sampled to identify the area or contaminant contributing zone since low flow sampling is a very focused method and can miss contamination.

The Department requires complete delineation of any free phase product and dissolved contamination in the wetlands as any product left in place acts as a long term source of dissolved ground water contamination. Free phase (or residual) product must be treated, removed or controlled to prevent any discharge to the Rockaway River. Free phase product is documented in MW-30i and MW-31s. MW-32s also reported total xylene at 39,000 ppb and at MW-35s between 46,000 to 51,000 ppb. No additional data exist downgradient of these points as delineation points.

There appears to be an ongoing discharge of free or dissolved product to an Environmentally Sensitive Natural Resource (ESNR). An Ecological Evaluation and Risk Assessment pursuant to N.J.A.C. 7:26E-1.19 and N.J.A.C. 7:26E-3.11 must be conducted and appropriate remedial measures implemented. The proposed 4 well points appear inadequate to characterize and delineate contamination potentially impacting the adjacent wetlands (i.e., ESNR).

No information on the process for selection of phytoremediation for treatment of BEHP-contaminated soil or ground water was provided. Treatability studies should have been conducted, however this information was not included. Phytoremediation may be limited by high contaminant concentrations, as these concentrations are likely to be phytotoxic or could cause a decrease in plant growth. Areas of higher, phytotoxic contaminant concentrations (e.g., residual product) may have to be treated using other technologies, or excavated and landfilled, with phytoremediation being used for the lower contaminant concentration areas of a site. The contaminant concentrations that are phytotoxic to specific plants are likely to be site-specific, and affected by soil, climate, and bioavailability. Aged compounds in soil can be much less bioavailable. This will decrease phytotoxicity, but can also decrease the effectiveness of phytoremediation. Site-specific phytotoxicity or treatability studies should use contaminated soil from the site rather than uncontaminated soil spiked with the contaminant. Phytotoxic concentration levels will need to be determined on a site-specific basis, although literature values from one site or from a laboratory study may not be applicable to another site with different soil and geochemical conditions (USEPA, 2001).

The report indicates a peristaltic pump will be employed for well point purging, and the well will be allowed to recover for one day. Purging with a peristaltic pump is acceptable, however it cannot be accepted for sampling. A peristaltic pump is a suction lift device and may drive off volatile compounds, resulting in biased low or ND sampling results. Accordingly, all sampling must be performed in accordance with methods and equipment approved by the Department in the Field Sampling Procedures Manual (August 2005).

The manufacturer's equipment brochure indicates the well points are ½" diameter. It has been the Department's experience that such a small well diameter results in erroneous water level readings. Accordingly, the Department recommends larger diameter well points for this investigation.

The NJDEP also recommends a mini bladder pump be used for purging and sampling. This avoids disturbing the water column after purging.

Product must be screened for with an interface probe prior to sampling.

Please incorporate these comments into the letter that the USEPA will be sending to LE Carpenter.

If you have any questions regarding this matter I may be contacted at (609) 633-1416, or at Anthony.Cinque@dep.state.nj.us.

Sincerely,

Anthony Cinque, Case Manager
Bureau of Case Management

cc: Steve Byrnes, NJDEP/BEERA
George Blyskun, NJDEP/BGWPA